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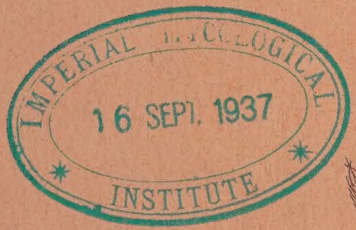

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CONTENTS

DISCOVERIES AND CURRENT EVENTS:—

Argentine Republic: Fungous Parasites New to the Country 197
Egypt: The Occurrence of the Desert Locust in the Country 198
Eritrea: Locusts 198
Mozambique: Locust Movements 198
Southern Rhodesia: Locust Invasion, 1932-1937 . . . 199
Italian Somaliland: Locusts 199
Switzerland: Outbreak of the Colorado Potato Beetle, *Leptinotarsa decemlineata*, in the Country 200

LEGISLATIVE AND ADMINISTRATIVE MEASURES:—

Germany 201
Germany (Prussia) 201
Austria (Confederation) . . . 202
Belgium 202
Belgian Congo 202
France 203
Guatemala 204
Indo-China 204
Italy 205
Libia 206
Switzerland 207
Uruguay 207

RECENT BIBLIOGRAPHY 207

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INTERNATIONAL BULLETIN OF PLANT PROTECTION

1937 No. 9

DISCOVERIES AND CURRENT EVENTS *

Argentine Republic: Fungous Parasites New to the Country †

The ' Dirección de Sanidad Vegetal ' of the Ministry of Agriculture gives the following information on fungous parasites observed for the first time in the Argentine Republic during the year 1936:—

Phytophthora sp. on pepper, proceeding from Colonia Alvear y San Rafael, Mendoza Province.

Sclerotium rolfsii Sacc. on apples, proceeding from the Islas del Delta del Paraná.

Verticillium sp. on the plum, proceeding from Máximo Paz, Buenos Aires Province.

Rhizoctonia sp. on flax, proceeding from José C. Paz, Buenos Aires, and Villaguay, Entre Rios.

Rhizoctonia solani Kühn on cotton, proceeding from Resistencia, Chaco.

Sphaeropsis malorum Peck on pine.

Botrytis sp. on persimmon fruits.

Ustilago cortaderiae n. sp. on *Cortaderia argentea.*

Uromyces hedysari-paniculati (Schw.) Furl. on *Desmodium cuneatum.*

Graphium necatrix (Hart.) Trev. on apple, proceeding from José C. Paz, Buenos Aires Province.

Helminthosporium allii Campanile on garlic, proceeding from Colonia Caroya, Córdoba Province.

Gloeosporium intermedium Sacc. var. *poinsettiae* on ' estrella federal ', proceeding from the Federal Capital.

Various virus diseases showing symptoms which in other parts of the world are described as corresponding to the pox of the plum, little peach of the peach, buckskin and mosaic of the cherry.

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the official correspondent of the Institute, Mr. JUAN B. MARCHIONATTO, Agronomical ' Ingenieur ', Director of ' Sanidad Vegetal ', Ministry of Agriculture, Buenos Aires, Argentine Republic.

Egypt: The Occurrence of the Desert Locust in the Country *

Further scouting of various desert regions revealed during July, 1937 the presence of *Schistocerca gregaria*, Forsk., in different localities north of the Kattara depression (see this *Bulletin*, 1937, No. 8, p. 175).

The infested area covered over ten thousand acres where both types of the desert locust were found in different concentrations.

A small outbreak of this species was also reported from Wadi Mit-Matny near Hassana in Sinai.

Control work in both places as well as in the coastal region of the North Western Desert referred to in last month's report, continued during July; the campaign ending at the close of the month.

Although the infested areas have been practically cleared, observations will be continued.

Information at hand show that some *Schistocerca* had also appeared during May and June, 1937 in Tripoli, i. e. on the other side of the Egyptian frontiers.

This supports the idea that the invading locusts in both cases had in all probability come from the South.

A detailed report on the campaign is in the course of preparation.

Eritrea: Locusts †

No locusts were reported in any part of the Colony during the month of June, 1937.

Mozambique: Locust Movements §

During the month of March, 1937, in the district of Porto Amelia, Niassa Province, 39 tons of hoppers were destroyed; in the Zambezia Province, considerable numbers of hopper bands were destroyed by chemical and mechanical means.

Summarizing, during this month, in the North of the Colony, little damage was effected; in the centre, Barué, Mutarara, Massingire, and Zambeze district were seriously attacked.

During the month of April, 1937, the red locust (*Nomadacris septemfasciata*) continued to come into Zambezia Province for the oviposition period; in the South of the Colony, and chiefly in the zone of the Maputo, Umbeluzi

* Communication from the Chief of Locust Bureau, Ministry of Agriculture, Egypt to the International Institute of Agriculture.

† Communication from Dr. MARCELLO GUBELLINI, Chief in Charge of the Agricultural Bureau of Eritrea, Asmara, transmitted to the Institute by the Government of the Colony.

§ Communication from Mr. JÚLIO GARDÉ ALFARO CARDOSO, Chief of the Section of Entomology, Lourenço Marques, transmitted to the Institute by the 'Repartição Técnica de Agricultura' of the Colony.

and Incomati rivers, egg-laying has been reported. The Tete district, especially in the Barué zone, is considerably infested, however, this is counterbalanced by other regions of the central part of the Colony which in former years were seriously attacked, being quite free from locusts this year. A similar report is received from the South of the Colony, where the appearance of hoppers was observed only in the districts of Sabié, Maputo and Inharrime, the remaining 11 districts being unaffected. The 1936-37 season is practically terminated; in the South of the Colony, owing to the inundations, control operations began late, and naturally were of little efficacy; however it has been ascertained that the inundations destroyed many layings and a considerable number of hoppers. No attacks by fungi or parasitic insects have been reported.

From the experiments concluded by the 'Brigada de Estudio' on methods of control, it was found that the use of poisoned bait made with maize flour, sodium arsenite and molasses, in practice gives excellent results. This method should be adopted during the following season, except in those zones covered with grass, where a sodium arsenite spray should be used. Experiments continue to indicate that the control methods to be employed, either mechanical or chemical, depend on local conditions. As, for example, was the case this year, the control workers in the regions which were inundated, were obliged to use flame throwers.

Southern Rhodesia: Locust Invasion, 1932-1937 *

Monthly Report No. 55. June, 1937.

A few winged swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.) have been reported in the north eastern portion of the Colony during June, 1937, the districts included being Lomagundi, Mazoe, Salisbury and Hartley. The swarms have been described mostly as 'large'.

Specimens examined have been normal swarm phase fliers of the early dry season.

No damage has been reported.

Italian Somaliland: Locusts †

During the months of May and June, 1937, no locusts were reported in the Colony.

* Communication from the official correspondent of the Institute, Mr. RUPERT W. JACK, F. E. S., Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

† Communication from Dr. FERRANTE PÀVERI-FONTANA, Chief in Charge of the Agricultural Bureau of Italian Somaliland, Mogadiscio, transmitted to the Institute by the Government of the Colony.

Switzerland: Outbreak of the Colorado Potato Beetle, *Leptinotarsa decemlineata*, in the Country *

The first adult beetle (a fecundated female) was found on 17 June, 1937 in the Lieu Commune (Joux Valley, at an altitude of about 1000 m.). At this period and in this region, many potatoes had just begun to grow. Since which period, a certain number of foci have been found in the aforesaid Valley.

At the end of July, 1937, the beetle was noted in the Canton of Geneva (30 communes), Vaud (55 communes), Neuchâtel (8 communes), Fribourg (2 communes), Bernese Jura (2 communes), approximately a total of 200 foci.

In every case, it is a question of a few adults, larvae or eggs, only covering a few square metres, consequently, extremely small areas, which are immediately treated by the extinctive system, which was established following the International Conferences regarding the Colorado beetle, held at Brussels and Berlin. About the areas thus treated, lead arseniate is applied to extensive protection zones.

Under the auspices of the Federal Department of Public Economy, Department of Agriculture, at Berne, a Commission of three members has been appointed in Switzerland to direct the control operations against the pest. This Commission is composed of Dr. Wahlen, Director of the Federal Station of Agricultural Experiments, at Oerlikon, near Zurich, Dr. Faes, Director od the Federal Wine-growing and Arboricultural Experiment Station, at Lausanne, and Mr. G. Bolens, Director of the Federal Experiment and Seed Control Station, at Mont-Calme, Lausanne.

The management and supervision of the control methods is carried out through the intermediary of the Federal Agricultural Establishments at Lausanne and Oerlikon, near Zurich.

Moreover, in each Canton, a Cantonal Commissioner should control local operations. In certain Cantons, also, each commune has nominated a local representative responsible for the work to be carried out.

Following a detailed study of the penetration of the Colorado potato beetle into Switzerland, it may be definitely affirmed that the insect did not exist in this country at the end of 1936. All the small foci observed in 1937 originate from swarms arriving directly this year from adjacent and contaminated French regions.

The State Council of the Vaud Canton, in its meeting held on 6 July, 1937 adopted, *inter alia*, the following measures for the control of the beetle: —

(1) The detailed inspection of all the potato fields of the Canton shall be continually carried out with the collaboration of the students of the primary classes and under the supervision of the instructors.

(2) Destruction of the foci of the Colorado potato beetle by means of carbon disulphide, shall be continued, though not at the expense of the proprietors.

* Communication from the official correspondent of the Institute, Dr. H. Faes, Director of the Federal Wine-growing and Arboricultural Experiment Station, Lausanne, Switzerland.

(3) Protection zones shall be established by compulsory treatment of all potato fields of these zones by spraying with a mixture of lead and copper arseniates. The necessary material shall be supplied gratis by the Confederation. Supplementary instructions shall be given to interested parties.

Potatoes cultivated in gardens or plantations shall not be treated, as it is strictly forbidden to apply directly or indirectly arsenical mixtures to vegetables of which the leaves are consumed. Fatal poisoning may result.

If communes or private individuals engage unemployed persons to carry out these operations, 50 per cent. of the salaries paid and expenses entailed, fixed at a normal rate, shall be reimbursed from the unemployment funds, if the unemployed persons possess their employment permit and have been assigned by the Cantonal Registry and Unemployment Office.

The Department of Agriculture, Industry and Commerce determines and modifies the protection zones according to circumstances.

(4) In each commune, the authorities shall appoint and at their expense if necessary, a communal official, assuming the responsiblity of the supervision of all control operations regarding the Colorado beetle in the commune.

The transport, in the living state, of adults, larvae, pupae and eggs, of the Colorado potato beetle, is forbidden. These are easily destroyed by paraffin or a few drops of petrol.

By Decree of 5 August, 1937, the State Council of the Vaud Canton has declared compulsory the treatment of potato crops against the second generation of the beetle throughout all the protection zones. The material required for this compulsory control will be supplied free of charge by the Confederation.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — By Ordinance of the 'Hauptvereinigung der deutschen Getreidewirtschaft', dated 8 June, 1937, cooperatives and all enterprises of a cooperative nature having installations for the cleaning and disinfection of cereal seeds, are obliged to allow non-affiliated persons the use of the said apparatus on payment of a appropiate sum. (*Nachrichtenblatt für den deutschen Pflanzenschutzdienst*, Berlin, Anfang Juli 1937, 17. Jahrg., Nr. 7, S. 59).

Germany (Prussia). — By Police Ordinance of 17 April, 1937, the control of the 'Liebstöckelrüssler' (*Otiorrhynchus ligustici*) is made compulsory in the circumscription of Mansfeld, Saxony Province.

The damage caused by this beetle gnawing near the surface of the ground the roots of lucerne and sometimes those of clover, and only occasionally sainfoin roots, may be so considerable as to seriously affect the cultivation of these crops and on occasion completely destroying the young plants during the course of the first year.

As the best method of control, the digging of ditches around the infested fields, of at least 25 cm. in depth and having vertical sides is recommended. At certain points, the ditches should be slightly deepened so as to form at every

20 or 30 metres an opening for the purpose of collecting the beetles, where they may be crushed or burnt.

The ditches should be prepared by 5 April at the latest, that is, before the migration period of the insects.

To obtain effective results, it is essential that the control measures should be most carefully applied and to all the fields attacked.

Every field, which after having been under lucerne or clover cultivation for over a year, shall have been ploughed during the period extending from 1 July, 1936 to 30 April, 1937, must be surrounded by ditches in the manner described above.

In the event of the persons concerned not carrying out within the desired period, the necessary operations, the police authorities may entrust the said operations to other persons at their expense. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juli 1937, Bd. IX, Nr. 5, S. 106-108).

Austria (Confederation). — By Decree No. 103, published on 10 April, 1937, the countries considered as being free from the wart disease of potato [*Synchytrium endobioticum*], and from which fresh tubers may be imported into the Confederation by rail, are the following:— Egypt, French Colonies and Protectorates in North Africa, Italy, Yugoslavia, Malta, Rumania, and Hungary.

Decree No. 122 of 1936 [see this *Bulletin*, 1936, No. 12, p. 266] is repealed. (*Bundesgesetzblatt für den Bundesstaat Österreich*, Wien, 10. April 1937, Jahrg. 1937, 27. Stück, S. 381).

Belgium. — A Ministerial Decree of 11 June, 1937, regulating the sale of potatoes intended for human consumption, establishes, *inter alia*, that the potatoes should be free from wart disease [*Synchytrium endobioticum*], or other diseases retained as harmful and green tubers. Foreign matter of any kind, as well as tubers showing lesions (injuries, cuts, necrosis of any type), and tubers unfit for human consumption, may not exceed 2 % of the total weight of each lot placed on sale. (*Moniteur Belge*, Bruxelles, 1er juillet 1937, 107e année, nº 182, p. 4137-4138).

*** By Royal Decree of 15 June, 1937, and under reserve of the disposi tions of the Law of 3 January, 1933 on the carrying of fire-arms, proprietors, farmers and all land owners, must destroy, by every possible means, the hamsters [*Cricetus frumentarius*] found on the lands occupied by them.

In the event of those concerned being unable to employ effective means of destruction or where methods are found to be insufficient, the burgomaster may officially attend to the destruction of the hamster in the territory of the commune.

This same authority is the right of the Governor either for the whole province or for that part which he may indicate. (*Ibid.*, 5-6 juillet 1937, nos 186-187, p. 4252).

Belgian Congo. — By Decree of the Provincial Commissioner, Chief of the Province of Costermansville, No. 56/Agri., of 14 November, 1936, the directors of societies, managers of coffee estates, and the colonists of the Rutshuru

territory are obliged to carry out one of more treatments with pyrethrum powder on all the coffee plants of their plantations on the day and under the conditions established by the entomologist of agronomist in charge of the control of *Lygus* sp., cause of the abortion of coffee flowers.

It will also be necessary to take every means to prevent the spread of the insect, for example: pruning or the coffee plants, shade trees, of cover plants, and maintaining the ground free from weeds.

In case of a refusal on the part of the interested parties, urgently required control measures shall be executed by the authorities at the expense of the persons in question. (*Bulletin Administratif du Congo Belge*, Léopoldville-Kalina, 25 mars 1937, 26me année, nº 6, p. 143-144).

*** By Decree of the Provincial Commissioner, Chief of Leopoldville Province, No. 85/Agr., dated 10 March, 1937, the region in the said Province comprised within the limits of the Lower Congo district is declared affected by the banana weevil (*Cosmopolites sordidus*).

The import or transit in Leopoldville Province of cuttings, shoots, bulbs, stems, or parts of stems of banana plants, originating in the above-mentioned region, as well in the neighbouring Colonies of this region (French Equatorial Africa, enclave of Cabinda, Angola), may not be carried out except on previous authorization by the Chief of the Province.

The authorization for import or transit from the neighbouring Colonies is subject to the presentation of an official health certificate of origin, in two copies, declaring that the shoots, suckers, or other parts of the banana plant are free from this weevil in all its biological forms (adult, nymph, larva, eggs) and in general from any species of entomological or cryptogamic infection.

The health certificate in the case of the Lower-Congo district is issued by an officer of the Service of Agriculture and Forests, or by an expert of the ' Inéac ' [National Institute for Agricultural Research in the Belgian Congo], at the expense of the importer or transit goods agent. (*Ibid.*, 25 avril 1937, nº 8, p. 189-191).

France. — A Decree of 11 May, 1937, provides, *inter alia*, for the following measures:—

Every seller of insecticidal, anticryptogamic or fungicidal products, and in general of all products (raw materials or compounds) adopted in the control of crop pests and diseases, but other than copper products, is obliged to specify in his prospectus, advertisements, price-lists, and commercial documents, the denomination of the products placed on sale, with the indication of their natural or industrial origin, their content in active elements and the nature or the state of the combination of these latter:—

(*a*) The origin should be indicated, if in the case of an industrial product, by the name of the factory or firm which has manufactured or caused to be prepared this product, and if it is a natural product, either pure or simply selected and powdered, by the region or locality from where it was obtained;

(*b*) The content in active elements should be indicated by the weight of these active components contained in 100 kgs. or in 100 litres of the preparation.

According to the state under which it is delivered, the active principle is designated by the names of the metalloids or metals in the case of a simple or compound preparation, and by the name of the alcaloid, if it is a organic preparation.

If the organic product is a compound preparation and designated by a patented name, this is the name which shall be specified.

On the other hand, the Decree indicates the manner in which the nature or state, compound or otherwise, of the active principles should be named. The indication of the quality is compulsory for one category of products.

In conclusion, it is specified that any person engaged in the commerce of the products included in the Decree, is obliged to forward to the Ministry of Agriculture, before publication two examples of all catalogues and prospectuses regarding the sale of the products. He shall also be requined to supply any necessary information to agents qualified to establish the exactness of his allegations. (*Journal officiel de la République française*, Paris, 15 mai 1937, LXIX^{ème} année, nº 112, p. 5299-5301).

Guatemala. — The ' Memoria ' of the Ministry of Agriculture for the year 1936, presented to the Legislative Assembly in 1937, notify, *inter alia*, that in taking the necessary measures as regards plant protection through the ' Dirección General de Agricultura ' imported the quantity of a hundred gallons of carbon bisulphide, colloidal sulphur, copper carbonate, nicotine sulphate and copper sulphate, which was distributed to the farmers at cost price; a similar procedure was carried in the case of calcium and lead arseniates together with the relative instructions.

In respect of the leaf spot (*Stilbum flavidum*), the disease which has caused the greatest damage to coffee plants in Guatemala, the aforesaid Ministry, with the cooperation of the departmental ' Jefaturas Políticas ', gave wide publicity to the best methods of control, excellent results ensuing.

The technical staff of the ' Dirección General de Agricultura ' assisted by the Departmental Inspectors, during the year 1936, among other activities, gave advice on plant diseases, and instruction in methods of control, and carried out the inspection of imported and exported plants and seeds, etc. (*Diario de Centro América*, Guatemala, 1º de mayo de 1937, tomo XIX, núm. 52, pág. 479).

Indo-China. — The Government, not yet having come to a decision in the postponement granted in respect of the deliberation of 24 October, 1936, of the Permanent Commission of the Government Council of the Government of Indo-China relative to the customs duties to be applied to insecticides, parasiticides, herbicides and fungicides compounds, other than those with a copper or pyrethrum basis (No. 0381 *quinquies*), this deliberation, considered as approved in virtue of Article 5 of the Law of 13 April, 1928 on the colonial customs regime, has been promulgated in Indo-China by local Decree of 26 April, 1937. (*Journal officiel de la République française*, Paris, 29 juin 1937, LXIX^{e} année, nº 149, p. 7369).

Italy. — By Ministerial Decree of 25 May, 1937, the removal of the twigs of citrus trees attacked by ' mal secco ' [*Deuterophoma tracheiphila*] and their destruction by fire have been made compulsory in the citrus growing zones of the province of Reggio Calabria.

The incumbent Syndicate for citrus cultivation in the above-mentioned province is charged with the organization and direction of the control measures to be carried out through the operation and at the expense of the holders of affected plantations; this Syndicate will also execute the said operations at the expense of those persons not carrying out these measures or delaying the said operations. (*Bollettino ufficiale del Ministero dell'Agricultura e delle Foreste*, Roma, 1º luglio 1937, anno IX, n. 13, pp. 1220-1221).

*** By Ministerial Decree of 25 May, 1937, the control of the olive fly [*Dacus oleae*], by means of arsenical sprays during the year 1937, has been made compulsory in the territory of the commune of Pisciotta, Salerno Province. (*Ibid.*, pp. 1221-1222).

*** By Ministerial Decree of 10 June, 1937, the incumbent Syndicates for fruit production in the provinces of Bologna, Ferrara, Verona, Padua, Treviso, Venice, and Ravenna are charged with the organization and management of control operations against the oriental fruit moth (*Cydia* [*Laspeyresia*] *molesta*) to be carried out at the expense of the proprietors of peach orchards situated in the communes of the above-mentioned provinces. The said Syndicates will also execute all control operations at the expense of those persons not carrying out these measures or delaying the said operations. (*Ibid.*, pp. 1222-1223).

*** By Ministerial Decree of 12 June, 1937, the control of the olive fly [*Daus oleae*] during the year 1937 by means of arsenical sprays, has been rendered compulsory in the territory of the commune of Alghero, Sassari Province.

The obligatory Syndicate for Olive-growing of the above-mentioned province is charged with the organization and supervision of the control operations to be carried out at the expense of the holders of olive groves established in the territory of the commune; this Syndicate is also charged with the execution of the said operations at the expense of those persons infringing these regulations or delaying the execution thereof. (*Ibid.*, 16 luglio 1937, n. 14, pp. 1268-1269).

*** By Ministerial Decree of 20 June, 1937, the territory of the commune of Controne, Province of Salerno, has been declared infested by grape phylloxera. (*Gazzetta ufficiale del Regno d'Italia*, Roma, 12 luglio 1937, anno 78º, n. 159, p. 2580).

*** By Ministerial Decree of 24 June, 1937, the proprietors and holders of lands under maize cultivation in the provinces of Varese, Verona, Vicenza, Udine and Trieste, should so arrange that before 30 April of every year, all maize stems should be utilized as stable litter and subsequently transported to the manure ditch, or else employed as fuel or as cattle feed, or in any other manner which would adequately ensure the destruction of caterpillars of the European corn borer [*Pyrausta nubilalis*]. This regulation applies to both the stems already gathered in heaps and to those not yet collected.

The collection of the stems should be effected by uprooting, or by cutting them level with the ground or under the soil, in such a way that after removing them, no stubble shall remain. Only in exceptional cases and on the advice of the competent Royal Phytopathological Observatory, may the stems be ploughed deeply into the soil.

Maize stems which, after 30 April of each year, shall not have been consumed or employed in any of the above-indicated ways, should be immediately burnt, if they are already collected in heaps, or cut level with the ground or under the soil to be subsequently burnt at the expense of the infractors of this Decree, who shall be punished in conformance with the dispositions in force.

Maize stems may not be exported from above-mentioned provinces. (*Bollettino ufficiale del Ministero dell'Agricoltura e delle Foreste*, 1° agosto 1937, n. 15, p. 1312-1313).

*** By Ministerial Decree of 25 June. 1937, an obligatory Syndicate for the improvement and development of horticultural, flower and fruit plants has been established in the province of Pistoia. (*Ibid.*, 16 luglio 1937, n. 14, pp. 1279-1280).

*** By Ministerial Decree of 26 June, 1937, the Provincial Syndicate for fruit-growing in Mantova is charged with the organization and supervision of the control operations against the oriental fruit moth (*Cydia* [*Laspeyresia*] *molesta*) to be carried out at the expense of the holders of peach orchards established in the the communes of the province of Mantova..

The aforesaid Syndicate is also charged to carry out control operations at the expense of persons contravening these regulations or delaying the execution thereof. (*Ibid.*, n. 15, p. 1313-1314).

*** The National Federation of Olive-growing Syndicates has opened a competition on the basis of qualifications and tests for the attribution of three bursaries for the specialized study of the animal and plant parasites affecting the olive-tree, at the Royal Station of Agricultural Entomology, Florence, the Royal Laboratory of Agricultural Entomology. Portici, and the Royal Station of Plant Pathology, Rome.

The total annual value of each scholarship amounts to ten thousand lires.

Libia. — By the Decree of the Governor General of Libia, No. 8352 dated 22 May, 1937, article 7 of the Decree No. 3669 of 12 April, 1930, is modified as follows:—

The control of consignments of fresh and dried fruit, citrus fruits and vegetables is carried out by the Royal Prefectures of Tripoli and Misurata, by means of competent technical agents of the said Prefectures.

In the case of any complaint, appeal to the General Government is allowed, which latter makes a rapid, definite and final decision, through the intermediary of the Central Office for the Agricultural Services of Libia, which on its part entrusts the regulation of the charge to the official directing the Phytopathological Service or his deputy. (*Agricoltura Libica*, Bollettino mensile del R. Ufficio Centrale per i Servizi Agrari della Libia, Tripoli, agosto 1937, anno VI, n. 8, p. 345).

Switzerland. — By Decree of the Federal Council of 26 May, 1937 the first article, 3rd paragraph of the Decree of the Federal Council of 5 October, 1925-19 May, 1926 relative to the control of potato wart disease [*Synchytrium endobioticum*] is abrogated and replaced by the following disposition:—

'The certificate of origin is valid for a maximum of 30 days calculated from the date of issue'. (*Recueil des Lois fédérales*, Berne, 2 juin 1937, tome 53, nº 21, p. 570).

Uruguay. — By Decree of 31 May, 1937, in each Department of the coast and the interior of the Republic, a Departmental Commission is established for the control of the 'abrojo grande' (*Xanthium macrocarpum* [= *X. canadense*]) declared as a pest plant by Decree of 9 October, 1915.

The said Commission is entrusted with all matters regarding the eradication of this weed, and shall be required to ensure that all proprietors of lands and holders of infested areas comply as soon as possible with the measures indicated for the destruction of this weed.

The weed should be destroyed before fruiting in order to prevent propagation; the last day of February has been established as the date on which all control measures shall have been executed.

For the present campaign, a sum of 8,000 pesos has been voted to meet the expenses incurred in vulgarization work, pamphlets, etc. for assuring the success of control operations. (*La Propaganda Rural*, Montevideo, junio de 1937, año XXV, núm. 809, págs. 5 y 6).

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[The first volume contains, *inter alia*, the following chapters:—
XI. Fungicides.
XII. Insecticides.

In the second volume, chapters XXXVIII-XL of the first book, XXV-XXVII of the second book, and XVII-XVIII of the fourth book, deal respectively with diseases and pests of coffee, cacao, and tea.
In the third volume, chapters XXXI-XXXII of the first book, XV of the second book, XV-XVI of the third book, and IX of the fourth book are devoted respectively to cotton diseases and pests, to the animal parasites of ramie, and to the diseases and pests of sisal and roselle].

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In the present book an attempt has been made to place before fruit-growers and students a simple and brief account of some of the more important insect and allied pests that occur on fruits and hop. Attention has been concentrated on the practical utility and methods of application of insecticides. The note on each of the pests described is followed by more important references.
The volume is divided into the following chapters: I. Apple. – II. Cherry. – III. Currant: Red, White and Black. – IV. Gooseberry. – V. Loganberry, Blackberry, Himalaya Berry and phenomenal Berry. – VI. Nut: Cob, Filbert and Walnut. – VII. Peach, Apricot and Nectarine. – VIII. Pear. –

IX. Plum and Damson. – X. Raspberry. – XI. Strawberry. – XII. Hop. – XIII. Beneficial and Harmless Insects. – XIV. Insecticides. – XV. Spraying Equipment and Methods. This last chapter is written by J. Turnbull].

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